

REMARKS

The Examiner is thanked for the courtesy of the Interview that occurred on Thursday August 25th regarding the outstanding final office action. The points discussed in the interview regarding the differences between the present invention and the cited Noma reference are repeated below.

The Art Based Rejections

All of the outstanding art based rejections are based on the Noma reference standing alone or taken in combination with other references. Claims 1-6 (both as originally filed and as presently presented) are directed towards an opto-electronic die that has conductive structures that are formed within the die (as opposed to along the side edges of the die) and are exposed on the opposite side of the die than the photonic device. It is respectfully submitted that the cited Noma reference does not disclose or reasonably suggest such a structure. Specifically, the conductive structures 9(a) shown in Fig. 1A of the Noma reference are deposited on the side edges of the die. Thus, they are not formed in the die as required by claim 1. In view of the foregoing, it is respectfully submitted that the pending rejections of the claims 1-6 should be withdrawn for at least this reason.

In the interview, the Examiner explained an interpretation of Noma that treated the protection film 10(a) as part of the “die” and therefore that the conductors 9(a) that were therefore, the conductors 9(a) were formed “in and through” the “die” and were “not on the side edges” of the die and thus met the language of claim 1. Although it is respectfully submitted that this interpretation is not proper and that the Noma reference did not meet the language of claim 1, in order to avoid any ambiguity, claim 1 has been amended to make it clear that the claimed conductive structures pass through the semiconductor material and are not formed on the edges of the semiconductor material that make up the die. As discussed in the interview, it is respectfully submitted (and it is believed that the Examiner agrees) that such a structure patentably distinguishes the Noma reference.

Claims 7-12 are directed at wafers having a plurality of photonic devices formed therein. The claims require conductive structure formed in the wafer that are exposed on the opposite side of the wafer as the photonic devices. Again, it is respectfully submitted that the conductors 9a described by Noma are not formed within the semiconductor substrate. Rather, they are deposited on peripheral portions of integrated circuits that are diced from the wafer. In view of the foregoing, it is respectfully submitted that the pending rejections of the claims 7-12 should be withdrawn for at least this reason.

It is noted that the rejections of some of the dependent claims incorporated secondary references as part of an obviousness rejection. However, it is respectfully submitted that the secondary references do not make up for the deficiencies in the primary reference and that therefore all of the outstanding rejections should be withdrawn. Additionally, the dependent claims require additional limitations that when considered in the context of the claimed invention, further patentably distinguish the art of record.

In view of the foregoing, it is respectfully submitted that all pending claims are patentable over the art of record and that this case is now in condition for allowance. Should the Examiner have any remaining concerns regarding the present application, he is encouraged to contact the undersigned at the telephone number set out below.

Respectfully submitted,
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